FACT SHEET

as required by LAC 33:IX.3109 for major LPDES facilities, for draft **Louisiana Pollutant Discharge Elimination System Permit No. LA0065978; AI 19928; PER20090001** to discharge to waters of the **State of Louisiana** as per LAC 33:IX.2311.

The **permitting authority** for the Louisiana Pollutant Discharge Elimination System (LPDES) is:

Louisiana Department of Environmental Quality
Office of Environmental Services
P. O. Box 4313
Baton Rouge, Louisiana 70821-4313

I. **THE APPLICANT IS:** City of Bossier City
Northeast Wastewater Treatment Plant
P.O. Box 5337
Bossier City, LA 71171

II. **PREPARED BY:** Eura DeHart

DATE PREPARED: February 18, 2010

III. **PERMIT ACTION:** reissue LPDES permit LA0065978, AI 19928; PER20090001

LPDES application received: May 27, 2009

EPA has not retained enforcement authority.

LPDES permit issued: October 25, 2004
LPDES permit expired: November 30, 2009

IV. **FACILITY INFORMATION:**

A. The application is for the discharge of treated sanitary wastewater from a publicly owned treatment works serving the City of Bossier City, from north of Highway 80 and continues north of the city limits into Bossier Parish.

B. The permit application does indicate the receipt of industrial wastewater. The industrial dischargers include:

Name of Discharger	Flow
BJ Services	0.00812 MGD
CellXion LLC	0.1615 MGD
Cintas Corporation	0.0764 MGD
Custom Printed Products	0.0025 MGD
Halliburton Energy Services	0.02115 MGD
Peterbilt of Shreveport, LLC	0.0019 MGD
Louisiana Machinery Company, Inc.	0.0132859 MGD
Pilgrims Pride	0.16 MGD

C. The facility is located at 8000 Shed Road in Bossier City, Bossier Parish.

D. The treatment facility consists of two manual bar screens, and an aerated grit chamber. The flow then enters two oxidation ditches which contain aeration. Then the flow enters two final clarifiers. Disinfection is by chlorination.

E. Outfall 001

Discharge Location: Latitude 32° 33' 10.87" North
Longitude 93° 43' 53.49" West

Description: treated sanitary wastewater

Design Capacity: 6.0 MGD

Type of Flow Measurement which the facility is currently using:
Parshall Flume with Continuous Recorder

V. RECEIVING WATERS:

The discharge is into the Red River in segment 100101 of the Red River Basin. This segment is listed on the 303(d) list of impaired waterbodies.

The **critical low flow** (7Q10) of the Red River is 1275 cfs.

The **hardness value** is 188 mg/l and the **fifteenth percentile value for TSS** is 23.7 mg/l.

The designated uses and degree of support for Segment 100101 of the Red River Basin are as indicated in the table below[1/]:

Degree of Support of Each Use						
Primary Contact Recreation	Secondary Contact Recreation	Propagation of Fish & Wildlife	Outstanding Natural Resource Water	Drinking Water Supply	Shell fish Propagation	Agriculture
Full	Full	Not Supported	N/A	Not Supported	N/A	Full

[1/]The designated uses and degree of support for Segment 100101 of the Red River Basin are as indicated in LAC 33:IX.1123.C.3, Table (3) and the 2006 Water Quality Management Plan, Water Quality Inventory Integrated Report, Appendix A, respectively.

VI. ENDANGERED SPECIES:

The receiving waterbody, Subsegment 100101 of the Red River Basin, has been identified by the U.S. Fish and Wildlife Service (FWS) as habitat for the *pink mucket pearly mussel*, which is listed as a threatened/endangered species. As set forth in the Memorandum of Understanding between the LDEQ and the FWS, LDEQ will consult with FWS. The draft permit has been sent to the FWS for review. LDEQ has determined that the issuance of the LPDES permit is not likely to have an adverse affect upon the *pink mucket pearly mussel* since effluent limitations are established in the permit to ensure protection of aquatic life and maintenance of the receiving water as aquatic habitat.

VII. HISTORIC SITES:

The discharge is from an existing facility location, which does not include an expansion beyond the existing perimeter. Therefore, there should be no potential effect to sites or properties on or eligible for listing on the National Register of Historic Places, and in accordance with the 'Memorandum of Understanding for the Protection of Historic Properties in Louisiana Regarding LPDES Permits' no consultation with the Louisiana State Historic Preservation Officer is required.

VIII. PUBLIC NOTICE:

Upon publication of the public notice, a public comment period shall begin on the date of publication and last for at least 30 days thereafter. During this period, any interested persons may submit written comments on the draft permit and may request a public hearing to clarify issues involved in the permit decision at this Office's address on the first page of the statement of basis. A request for a public hearing shall be in writing and shall state the nature of the issues proposed to be raised in the hearing.

Public notice published in:

Local newspaper of general circulation

Office of Environmental Services Public Notice Mailing List

For additional information, contact:

Mr. Eura DeHart
Water Permits Division
Department of Environmental Quality
Office of Environmental Services
P. O. Box 4313
Baton Rouge, Louisiana 70821-4313

IX. PROPOSED PERMIT LIMITS:

Subsegment 100101, Red River – Arkansas State Line to Alexandria (La. Hwy. 165), is listed on LDEQ's Final 2006 303(d) List as impaired for sulfates (EPA - Category 5) and color (EPA – Category 5). To date no TMDLs have been completed for this waterbody. A reopener clause will be established in the permit to allow for the requirement of more stringent effluent limitations and requirements as imposed by a TMDL. Until completion of TMDLs for the Red River Basin, those suspected causes for impairment which are not directly attributed to the sanitary wastewater point source category have been eliminated in the formulation of effluent limitations and other requirements of this permit. Additionally, suspected causes of impairment which could be attributed to pollutants which were not determined to be discharged at a level which would cause, have the reasonable potential to cause or contribute to an excursion above any present state water quality standard were also eliminated.

Final Effluent Limits:

OUTFALL 001

Final limits shall become effective on the effective date of the permit and expire on the expiration date of the permit.

Effluent Characteristic	Monthly Avg. (lbs./day)	Monthly Avg.*	Weekly Avg.*	Basis
BOD_5	1501.2	30 mg/l	45 mg/l	Limits are set in accordance with the Statewide Sanitary Effluent Limitations Policy (SSELP) for facilities of this treatment type and size which discharge into the Red River.
TSS	1501.2	30 mg/l	45 mg/l	Since there is no numeric water quality criterion for TSS, and in accordance with the current Water Quality Management Plan, the TSS effluent limitations shall be based on a case-by-case evaluation of the treatment technology being utilized at a facility. Therefore, a Technology Based Limit has been established through Best Professional Judgement for the type of treatment technology utilized at this facility.
Sulfate	Report	---	---	Because the receiving waterbody is impaired for sulfate, "Report" has been placed into the permit for information gathering purposes.

*Concentration limits are used in accordance with LAC 33:IX.2709.F.1.b which states that mass limitations are not necessary when applicable standards and limitations are expressed in other units of measurement. LAC 33:IX.709.B references LAC 33:IX.711 which express BOD_5 and TSS in terms of concentration.

Priority Pollutants

Effluent Characteristics	Monthly Avg. (lbs./day)	Daily Maximum (lbs./day)	Basis
Chlordane	0.0013	0.00313	Water Quality Based Limit

The above draft priority pollutants limit(s) for Chlordane is based upon the evaluation of one effluent analyses. The permittee may conduct and submit the results of three (3) or more additional effluent analyses to either refute or substantiate the presence of the above toxic pollutants. The additional analyses will be evaluated by this Office to determine if the pollutant is potentially in the effluent and if it potentially exceeds the State's water quality standards.

Other Effluent Limitations:

1) Fecal Coliform

The discharge from this facility is into a water body which has a designated use of Primary Contact Recreation. According to LAC 33:IX.1113.C.5., the fecal coliform standards for this water body are 200/100 ml and 400/100 ml. Therefore, the limits of 200/100 ml (Monthly Average) and 400/100 ml (Weekly Average) are proposed as Fecal Coliform limits in the permit. These limits are being proposed through Best Professional Judgement in order to ensure that the water body standards are not exceeded, and due to the fact that existing facilities have demonstrated an ability to comply with these limitations using present available technology.

2) pH

According to LAC 33:IX.3705.A.1., POTW's must treat to at least secondary levels. Therefore, in accordance with LAC 33:IX.5905.C., the pH shall not be less than 6.0 standard units nor greater than 9.0 standard units at any time.

3) Solids and Foam

There shall be no discharge of floating solids or visible foam in other than trace amounts in accordance with LAC 33:IX.1113.B.7.

4) Total Residual Chlorine

If chlorination is used to achieve the limitations on Fecal Coliform Bacteria, the effluent shall contain NO MEASURABLE Total Residual Chlorine (TRC) after disinfection and prior to disposal. Given the current constraints pertaining to chlorine analytical methods, NO MEASURABLE will be defined as less than 0.1 mg/l of chlorine. The TRC shall be monitored daily by grab sample.

Toxicity Characteristics

In accordance with EPA's Region 6 Post-Third Round Toxics Strategy, permits issued to treatment works treating domestic wastewater with a flow (design or expected) greater than or equal to 1 MGD shall require biomonitoring at some frequency for the life of the permit or where available data show resonable potential to cause lethal and/or sub-lethal toxicity, the permit shall require a whole effluent toxicity (WET) limit (*Permitting Guidance Document for Implementing Louisiana Surface Water Quality Standards,* October 7, 2009, Version 7).

Whole effluent biomonitoring is the most direct measure of potential toxicity which incorporates the effects of synergism of the effluent components and receiving stream water quality characteristics. Biomonitoring of the effluent is, therefore, required as a condition of this permit to assess potential toxicity. LAC 33:IX.1121.B.3. provides for the use of biomonitoring to monitor the effluent for protection of State waters. The biomonitoring procedures stipulated as a condition of this permit are as follows:

The permittee shall submit the results of any biomonitoring testings performed in accordance with the LPDES Permit No. LA0065978, **Biomonitoring Section** for the organisms indicated below.

TOXICITY TESTS	FREQUENCY
Acute static renewal 48-hour definitive toxicity test using Daphnia pulex	Once/Quarter
Acute static renewal 48-hour definitive toxicity test using fathead minnow (Pimephales promelas)	Once/Quarter

Dilution Series - The permit requires five (5) dilutions in addition to the control (0% effluent) to be used in the toxicity tests. These additional concentrations shall be 9%, 12%, 16%, 21%, and 29%. The biomonitoring critical dilution is defined as 21% effluent. The critical dilution is calculated in Appendix B-1 of this fact sheet. Results of all dilutions shall be documented in a full report according to the test method publication mentioned in the **Biomonitoring Section** under Whole Effluent Toxicity. This full report shall be submitted to the Office of Environmental Compliance as contained in the Reporting Paragraph located in the **Biomonitoring Section** of the permit.

The permit may be reopened to require effluent limits, additional testing, and/or other appropriate actions to address toxicity if biomonitoring data show actual or potential ambient toxicity to be the result of the permittee's discharge to the receiving stream or water body. Modification or revocation of the permit is subject to the provisions of LAC 33:IX.2903. Accelerated or intensified toxicity testing may be required in accordance with Section 308 of the Clean Water Act.

X. PREVIOUS PERMITS:

LPDES Permit No. LA0065978: Issued: October 25, 2004
Expired: November 30, 2009

Effluent Characteristic	Discharge Limitations		Monitoring Requirements	
	Monthly Avg.	Weekly Avg.	Measurement Frequency	Sample Type
Flow	Report	Report	Continuous	Recorder
BOD_5	30 mg/l	45 mg/l	2/week	12 Hr. Composite
TSS	30 mg/l	45 mg/l	2/week	12 Hr. Composite
Fecal Coliform Colonies	200	400	1/week	Grab
TRC	---	---	5/week	Grab
Sulfate	---	---	1/Quarter	12 Hr. Composite
pH	6.0 (min)	9.0 (max)	5/week	Grab

The permit contains biomonitoring.
The permit contains pollution prevention language.

XI. ENFORCEMENT AND SURVEILLANCE ACTIONS:

A) Inspections

A review of the files indicates the most recent inspection was performed on December 17, 2008 for this facility. The following was noted:

- The WWTP, 6 MGD design capacity, was operating satisfactory. All treatment units were in service.
- DMR's, year 2008, revealed no reported permit exceedences.
- The WWTP's aeration basins, oxidation ditches, has a large concentration of solids. 30-minute settleable solids are averaging 900mL/1000mL. The WWTP has an operational belt press used for sludge wasting. Current effluent TSS concentrations and loading numbers are satisfactory.
- Effluent flow meters were operating satisfactory. Effluent flow meter #1 read -4.29% of actual flow. Effluent flow meter #2 read -8.10% of actual flow.
- Lab QA/QC procedures were satisfactory. Lab has an occasional BOD_5 seed or dilution water issue.

B) Compliance and/or Administrative Orders

A review of the files indicates there are no recent enforcement actions administered against this facility.

C) DMR Review

A review of the discharge monitoring reports for the period beginning November 2007 through October 2009 has revealed the following violations:

Parameter	Outfall	Period of Excursion	Permit Limit	Reported Quantity
TRC	001	November 2007	0.099	0.14
Fecal Coliform	001	November 2007	200	207

XII. ADDITIONAL INFORMATION:

The Louisiana Department of Environmental Quality (LDEQ) reserves the right to modify or revoke and reissue this permit based upon any changes to established TMDLs for this discharge, or to accommodate for pollutant trading provisions in approved TMDL watersheds as requested by the permittee and/or as necessary to achieve compliance with water quality standards. Therefore, prior to upgrading or expanding this facility, the permittee should contact the Department to determine the status of the work being done to establish future effluent limitations and additional permit conditions.

This permit may be modified, or alternatively, revoked and reissued, to comply with any applicable effluent standard or limitations issued or approved under sections 301(b)(2)(C) and (D); 304(b)(2); and 307(a)(2) of the Clean Water Act or more stringent discharge limitations and/or additional restrictions in the future to maintain the water quality integrity and the designated uses of the receiving water bodies based upon additional water quality studies and/or TMDLs, if the effluent standard, limitations, water quality studies or TMDLs so issued or approved:

a) Contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or

b) Controls any pollutant not limited in the permit; or

c) Requires reassessment due to change in 303(d) status of waterbody; or

d) Incorporates the results of any total maximum daily load allocation, which may be approved for the receiving water body.

Final effluent loadings (i.e. lbs/day) have been established based upon the permit limit concentrations and the design capacity of 6.0 MGD.

Effluent loadings are calculated using the following example:

BOD: 8.34 lb/gal x 6.0 MGD x 30 mg/l = 1501.2 lb/day

At present, the **Monitoring Requirements, Sample Types, and Frequency of Sampling** are listed below:

Effluent Characteristics	Monitoring Requirements	
	Measurement Frequency	Sample Type
Flow	Continuous	Recorder
BOD_5	2/week	12 Hr. Composite
Total Suspended Solids	2/week	12 Hr. Composite
TRC	5/week	Grab
Fecal Coliform Bacteria	2/week	Grab
pH	2/week	Grab
Sulfate	1/quarter	12 Hr. Composite
Biomonitoring		
Daphnia pulex	1/quarter	24 Hr. Composite
Pimephales promelas	1/quarter	24 Hr. Composite

Please be aware that the Department has the authority to reduce monitoring frequencies when a permittee demonstrates two or more consecutive years of permit compliance. Monitoring frequencies established in LPDES permits are based on a number of factors, including but not limited to, the size of the discharge, the type of wastewater being discharged, the specific operations at the facility, past compliance history, similar facilities and best professional judgment of the reviewer. We encourage and invite each permittee to institute positive measures to ensure continued compliance with the LPDES permit, thereby qualifying for reduced monitoring frequencies upon permit reissuance. If the Department can be of any assistance in this area, please do not hesitate to contact us. As a reminder, the Department will also consider an increase in monitoring frequency upon permit reissuance when the permittee demonstrates continued non-compliance.

The nearest drinking water intake, Bossier City Water System, is located on the east bank of the Red River, north of I-220, which is above the Northeast Wastewater Treatment Facility's discharge location. Therefore, the discharge from the Northeast Wastewater Treatment Facility should have no impact on the Bossier City Water System.

Pretreatment Requirements

Based upon consultation with LDEQ pretreatment personnel, LDEQ Option 2A Pretreatment Language is included in LPDES Permit LA0065978. This language is established for municipalities with industrial users on their collection system and with an approved pretreatment program.

Pollution Prevention Requirements

The permittee shall institute or continue programs directed towards pollution prevention. The permittee shall institute or continue programs to improve the operating efficiency and extend the useful life of the

facility. The permittee will complete an annual Environmental Audit Report **each year** for the life of this permit according to the schedule below. The permittee will accomplish this requirement by completing an Environmental Audit Form which has been attached to the permit. All other requirements of the Municipal Wastewater Pollution Prevention Program are contained in Part II of the permit.
The audit evaluation period is as follows:

Audit Period Begins	Audit Period Ends	Audit Report Completion Date
Effective Date of Permit	12 Months from Audit Period Beginning Date	3 Months from Audit Period Ending Date

XIII. TENTATIVE DETERMINATION:

On the basis of preliminary staff review, the Department of Environmental Quality has made a tentative determination to reissue a permit for the discharge described in this Statement of Basis.

XIV. REFERENCES:

Louisiana Water Quality Management Plan / Continuing Planning Process, Vol. 8, "Wasteload Allocations / Total Maximum Daily Loads and Effluent Limitations Policy," Louisiana Department of Environmental Quality, 2005.

Louisiana Water Quality Management Plan / Continuing Planning Process, Vol. 5, "Water Quality Inventory Section 305(b) Report," Louisiana Department of Environmental Quality, 1998.

Louisiana Administrative Code, Title 33 - Environmental Quality, Part IX - Water Quality Regulations, Chapter 11 - "Louisiana Surface Water Quality Standards," Louisiana Department of Environmental Quality, 2004.

Louisiana Administrative Code, Title 33 - Environmental Quality, Part IX - Water Quality Regulations, Subpart 2 - "The LPDES Program," Louisiana Department of Environmental Quality, 2004.

Low-Flow Characteristics of Louisiana Streams, Water Resources Technical Report No. 22, United States Department of the Interior, Geological Survey, 1980.

Index to Surface Water Data in Louisiana, Water Resources Basic Records Report No. 17, United States Department of the Interior, Geological Survey, 1989.

LPDES Permit Application to Discharge Wastewater, City of Bossier City, Northeast Wastewater Treatment Plant, May 27, 2009.